

## An electrochemical aptasensor for cytochrome C, based on pillar[5]arene modified with Neutral Red

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### Abstract

© 2017, Pleiades Publishing, Ltd. An electrochemical aptasensor is developed for the highly sensitive determination of cytochrome C, using a change in the redox current of Neutral Red covalently bound to terminal carboxyl groups of decasubstituted pillar[5]arene as a signal. The inclusion of the analyte into the complex with an aptamer reduces peaks of redox current of the dye through the dissociation of electron transfer chain in the surface layer. The aptasensor enables the determination of 1 nM to 1.0 mM of cytochrome C in the presence of 1000-fold excesses of albumin, polyethylene glycol, and lysozyme as models of interfering components in biological fluids.

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### Keywords

aptasensor, determination of cytochrome C, mediator catalysis, Neutral Red

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